















Circular Knife Ø 74 T 1.5 V 30° R 0.05

A24-100

The fully automatized production of these circular paper knives allows to produce and resharpen large batches. For each knife the diameter and the thickness is measured. The first operation pregrinds the OD oscillating the wheel with partial increments. The sides are then preground with oscillations. The finishing operations left+radius and right side + radius are executed in 2 passes. The 1V1 grinding wheel thickness is chosen in order to keep permanent contact during oscillations.



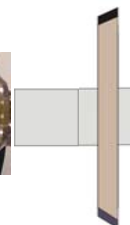
1. Cycletime for Production

| | | | | | | | | |
|---------------------|---|---|---|---|---|--|---|---|
| Workpiece: | Ø 74 mm, Thickness 2 mm, V 30°, R 0.05 | | | | | | | |
| Material | HSS | | | | | | | |
| Operations |  |  |  |  |  |  |  |  |
| Feed [mm/Min] | 2000 | 100 | 500 | 500 | 500 | 500 | 500 | 9000 |
| Power [kW] | | 1 | 4 | 3 | 2 | 2 | 2 | 1 |
| Cutting speed [m/s] | | 20 | 36 | 36 | 36 | 36 | 36 | |
| Used wheels | |  |  |  |  |  |  | |
| Grinding time [s] | 18 | 31 | 67 | 67 | 67 | 37 | 37 | 20 |
| Total cycle time | 5 Min 42 | | | | | | | |

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

| | |
|---|------------------|
| 1 | 1V1 Ø175 C80V60° |
|---|------------------|



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3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG Coolant: Synthetic Oil, pressure 6 bar
 Control: Fanuc 310i Software: Quinto 5
 Accessories: STL6056, CFG4550 Inner clamping, fix DressDiamond
 Responsible engineer: OP. 2.5.11

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